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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/933,517	08/20/2001	Masaru Mizutani	6116.61001	5946	
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QUARLES	& BRADY STREICH	LANG, LLP	MAYO, TARA L		
ONE SOUTH	I CHURCH AVENUE			· · · · · · · · · · · · · · · · · · ·	
SUITE 1700			ART UNIT	PAPER NUMBER	
TUCSON AZ 85701-1621			3671		

DATE MAILED: 11/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)					
	09/933,517	MIZUTANI, MASARU	\/.				
Office Action Summary	Examiner	Art Unit					
•	Tara L. Mayo	3671					
The MAILING DATE of this communication app							
Period for Reply							
A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply - If NO period for reply is specified above, the maximum statutory period v - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply within the statutory minimum of thirty (3) will apply and will expire SIX (6) MONTHS cause the application to become ABANI	be timely filed 0) days will be considered timely. 6 from the mailing date of this communi DONED (35 U.S.C. § 133).	cation.				
Status							
1) Responsive to communication(s) filed on 19 Au	ugust 2004.						
2a) This action is FINAL . 2b) ☐ This	action is non-final.						
3) Since this application is in condition for allowar	S) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is						
closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.							
Disposition of Claims							
4)⊠ Claim(s) 8-44 is/are pending in the application.							
· · · · · · · · · · · · · · · · · · ·	4a) Of the above claim(s) <u>30-43</u> is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.							
6)⊠ Claim(s) <u>8-29 and 44</u> is/are rejected.							
7) Claim(s) is/are objected to.							
8) Claim(s) are subject to restriction and/o	r election requirement.						
Application Papers							
9) The specification is objected to by the Examine	ır.	•					
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.							
Applicant may not request that any objection to the							
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).							
11) The oath or declaration is objected to by the Ex							
Priority under 35 U.S.C. § 119							
12)⊠ Acknowledgment is made of a claim for foreign	priority under 35 H S C & 1:	19(a)-(d) or (f)					
a) ⊠ All b) ☐ Some * c) ☐ None of:	priority under 55 5.5.5. § 1	13(a)-(a) or (1).					
1.⊠ Certified copies of the priority document	s have been received						
2. Certified copies of the priority document		lication No					
3. Copies of the certified copies of the prior	• •		e				
application from the International Bureau							
* See the attached detailed Office action for a list	• • • • • • • • • • • • • • • • • • • •	ceived.					
	•						
Attachment(s)			•				
1) Notice of References Cited (PTO-892)	4) Interview Sum	nmary (PTO-413)					
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/N	fail Date					
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date	5) Notice of Infor 6) Other:	mal Patent Application (PTO-152)					

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DETAILED ACTION

Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 8 through 10, 16, 18, 22, 24, 28, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports.

Meilahn '024, as seen in Figures 1 through 12, shows a seawater pool comprising: with regard to claim 8,

a pool structure (24) floating on a sea (26; col. 3, lines 30 through 32); and means for collecting and supplying seawater (39) to the pool structure; with regard to claim 9,

further comprising means for mooring (25) the pool structure at a fixed location; with regard to claim 10,

wherein the means for mooring includes an anchor (29);

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with regard to claim 16,

further comprising means for draining the water (47) from the pool structure; with regard to claim 18,

further comprising a facility (56) for enabling fishing from a side of the pool structure; with regard to claim 28,

the means for collecting and supplying seawater including an intake pipe (41); and with regard to claim 44,

a pool structure (24); and

means for collecting and supplying seawater (39) to the pool structure.

Meilahn '024 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claims 8 and 44,

means for collecting and supplying seawater being capable of collecting and supplying deep-sea water;

with regard to claim 22,

means for solar power generation;

with regard to claim 24,

means for wind power generation; and

with regard to claim 28,

the means for collecting and supplying deep-sea water to the pool structure including a check valve which only allows an upward flow of the deep-sea water.

Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan discloses the establishment of deep-sea water pumping systems in Toyama Bay in 1989 and 1990 for the purposes of research in the cultivation of marine resources including aquaculture. Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water discloses the establishment of deep sea water pumping stations in the Kochi Prefecture. Miyamato High Degree of Application for Deep Sea Water in Fishing Ports teaches the advantages of a deep sea water collection facility. The advantages of deep-sea water taught by the references include the ability to culture cold-water organisms and deep-ocean organisms in tropical areas, ease at which water temperature can be controlled by mixing surface water with deep-sea water, and disease control (there are few viruses and pathogenic bacteria in deep sea water).

With regard to claims 8 and 44, it would have been obvious to one of ordinary skill in the art of animal husbandry at the time of invention to modify the means for collecting supplying shown by Meilahn '024 such that it would comprise a deep-sea water pumping system as suggested by Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports. The motivation would have been to cultivate cold-water organisms in the pool structure.

With regard to claims 22 and 24, it is a well-known expedient in the art of power generation to use solar and wind energy to operate domestic and industrial facilities.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify the device disclosed by the combination of Meilahn '024 and Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports such that it would include means for generating solar or wind power. The motivation would have been to include a cost efficient energy source.

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With regard to claim 29, it would have been obvious to one of ordinary skill in the art of fluid handling at the time of invention to modify the device shown by the combination of Meilahn '024 and Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports such that the means for collecting and supplying deep-sea water would include a check valve on the intake pipe. The motivation would have been to prevent loss of water from the pool structure.

3. Claims 11 through 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports as applied to claims 8 and 9 above, and further in view of Mougin (U.S. Patent No. 4,166,363).

Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary

Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep

Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports

discloses all of the features of the claimed invention with the exception(s) of:

with regard to claims 11 and 12,

a propulsion device; and

with regard to claim 13,

the propulsion device including a propeller.

Mougin '363, as seen in Figures 1 through 3, shows a floating pool structure provided with a propeller (3) for driving the same.

With regard to claims 11 through 13, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports such that it would include a propulsion unit as taught by Mougin '363. The motivation would have been to facilitate relocation of the pool structure within a body of water.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports as applied to claim 8 above, and further in view of O'Hare (U.S. Patent No. 5,669,330).

Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary

Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep

Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports

discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 14,

a plurality of extensions protruding from the pool structure.

O'Hare '330, as seen in Fig. 1, shows an aquatic organism habitat device (10) comprising a plurality of extensions (17) protruding from the bottom of horizontal member (11) attached to a preexisting bulkhead (12) for encouraging and supporting aquatic growth of marine organisms.

With regard to claim 14, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device disclosed by Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay,

Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High

Degree of Application for Deep Sea Water in Fishing Ports such that it would include a plurality of extensions as taught by O'Hare '330. The motivation would have been to dually provide a pool structure capable of supporting aquatic life on its exterior.

5. Claims 15, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports; and Mougin (U.S. Patent No. 4,166,363) as applied to claim 12 above, and further in view of O'Hare (U.S. Patent No. 5,669,330).

Meilahn '024 further discloses:

with regard to claim 17,

means for draining the deep sea water (47) from the pool structure; and with regard to claim 19,

a facility (56) for enabling fishing from a side of the pool structure.

Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary

Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep

Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports

and Mougin '363 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 15,

a plurality of extensions protruding from the pool structure.

O'Hare '330, as seen in Fig. 1, shows an aquatic organism habitat device (10) comprising a plurality of extensions (17) protruding from the bottom of horizontal member (11) attached to a preexisting bulkhead (12) for encouraging and supporting aquatic growth of marine organisms.

With regard to claim 15, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device disclosed by Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports; and Mougin '363 such that it would include a plurality of extensions as taught by O'Hare '330. The motivation would have been to dually provide a pool structure capable of supporting aquatic life on its exterior.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports as applied to claim 8 above, and further in view of Puncochar (U.S. Patent No. 3,571,819).

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Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary

Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep

Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports

further teaches the desirability of aeration in the tanks (col. 5, lines 26 and 30) and discloses

all of the features of the claimed invention with the exception(s) of:

with regard to claim 20,

means for generating and mixing air bubbles into the deep-sea water supplied to the pool.

Puncochar '819, as seen in Figs. 1 through 3, discloses a floating pool structure comprising means for generating and mixing air bubbles (24) into the deep-sea water supplied to the pool structure for preventing the ingress of unwanted sea organisms (col. 1, lines 21 through 35).

With regard to claim 20, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports such that it would include means for generating and mixing air bubbles into the deep-sea water supplied to the pool structure as taught by Puncochar '819. The motivation would have been to stimulate the growth of aquatic life in the pool structure.

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7. Claims 21, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports; Mougin (U.S. Patent No. 4,166,363); and O'Hare (U.S. Patent No. 5,669,330) as applied to claim 19 above, and further in view of Puncochar (U.S. Patent No. 3,571,819).

Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary

Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep

Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports;

Mougin '363; and O'Hare '330 teaches the desirability of aeration in the tanks (col. 5, lines 26 and 30) and discloses all of the features of the claimed invention the exception(s) of:

with regard to claim 21,

means for generating and mixing air bubbles into the deep-sea water supplied to the pool;

with regard to claim 23,

means for solar power generation; and

with regard to claim 25,

means for wind power generation.

Puncochar '819, as seen in Figs. 1 through 3, discloses a floating pool structure comprising means for generating and mixing air bubbles (24) into the deep-sea water supplied to the pool structure for preventing the ingress of unwanted sea organisms (col. 1, lines 21 through 35).

With regard to claim 21, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports; Mougin '363, and O'Hare '330 such that it would include means for generating and mixing air bubbles into the deep-sea water supplied to the pool structure as taught by Puncochar '819. The motivation would have been to stimulate the growth of aquatic life in the pool structure.

With regard to claims 23 and 25, it is a well-known expedient in the art of power generation to use solar and wind energy to operate domestic and industrial facilities.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify the device disclosed by the combination of Meilahn '024; Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports; Mougin '363; O'Hare '330; and Puncochar

'819 such that it would include means for generating solar power. The motivation would have been to include a cost efficient energy source.

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. Effect of Artificial Upwelling on Primary

Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep

Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports as applied to claim 8 above, and further in view of Atwell (U.S. Patent No. 4,536,257).

Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary

Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep

Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports

discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 26,

a seawater desalination plant.

Atwell '257 discloses a desalination system for providing potable water.

With regard to claim 26, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device shown by the combination of Meilahn '024 and Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep

Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports such that it would include a desalination system as taught by Atwell '257. The motivation would have been to provide a potable source of water on the apparatus.

9. Claims 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports; Mougin (U.S. Patent No. 4,166,363); O'Hare (U.S. Patent No. 5,669,330); and Puncochar (U.S. Patent No. 3,571,819) as applied to claim 25 above, and further in view of Atwell (U.S. Patent No. 4,536,257).

Meilahn '024 further discloses:

with regard to claim 29,

the means for collecting and supplying seawater including an intake pipe (41).

Meilahn '024 in view of Iseki et al. Effect of Artificial Upwelling on Primary

Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep

Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports;

Mougin '363; O'Hare '330; and Puncochar '819 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 27,

a seawater desalination plant; and with regard to claim 29,

the means for collecting and supplying deep-sea water to the pool structure including a check valve which only allows an upward flow of the deep-sea water.

Atwell '257 discloses a desalination system for providing potable water.

With regard to claim 27, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device shown by the combination of Meilahn '024; Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports; Mougin '363; O'Hare '330; and Puncochar '819 such that it would include a desalination system as taught by Atwell '257. The motivation would have been to provide a potable source of water on the apparatus.

With regard to claim 29, it would have been obvious to one of ordinary skill in the art of fluid handling at the time of invention to modify the device shown by the combination of Meilahn '024, Iseki et al. Effect of Artificial Upwelling on Primary Production in Toyama Bay, Japan; Nomura Treatment of Atopy Skin Inflammation by Deep Sea Water; and Miyamato High Degree of Application for Deep Sea Water in Fishing Ports; Mougin '363; O'Hare '330; Puncochar '819; and Atwell '257 such that the means for collecting and supplying deep-sea

water would include a check valve on the intake pipe. The motivation would have been to prevent loss of water from the pool structure.

Response to Arguments

10. Applicant's arguments with respect to claims 8 through 29 and 44 have been considered but are most in view of the new ground(s) of rejection.

With regard to Applicant's statements regarding the use of deep sea water pumping systems in the Kochi Prefecture, the fact that such knowledge or use took place "outside of the United States" does not disqualify it as prior art. Specifically, 35 USC §102(a) states: A person shall be entitled to a patent unless — (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent. In this instance, the invention was described in a printed publication in a foreign country.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tara L. Mayo whose telephone number is 703-305-3019. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 703-308-3870. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tlm

23 November 2004

AS B. Will

ry Patent Examiner